

What is Claimed

1. An apparatus for a web-phone service in a digital subscriber line (DSL), comprising:

5       a memory means for storing and managing an identification number (ID) number of a terminal;

      a transmission means for retrieving an ID number of an access-requested terminal from the memory means when the access-requesting terminal requests a web-phone service, transmitting the ID number of the access-requested terminal to an Internet protocol (IP) control means, receiving an allocated IP address of the access-requested terminal from the IP control means and transmitting the allocated IP address to the access-requesting terminal;

15       the IP control means for determining whether an IP address is allocated to the access-requested terminal and controlling an IP address allocation means to allocated an available IP address to the access-requested terminal which does not have an assigned IP address, by using an asynchronous transfer mode (ATM) pool number corresponding to the ID number of the access-requested terminal; and

20       the IP address allocation means for allocating an available IP address to the access-requested terminal which does not have an assigned IP address and reporting the allocated IP address to the IP address controlling means.

2. The apparatus as recited in claim 1, further comprising a web information storage means for storing and managing Internet contents of contents providers.

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3. The apparatus as recited in claim 1, wherein the access-requesting terminal is a terminal of Internet contents provider which provides Internet contents.

35       4. The apparatus as recited in claim 1, wherein the IP control means controls the IP address allocation means

to forcibly allocate an available IP address, which is not used in the terminal, by using an ATM header pool number corresponding to the ID number, extracts the IP address, stores the IP address as a form of database and returns the ID number upon an access request from the transmitting means.

5        5. A method for a web-phone service in a DSL, comprising the steps of:

10        a) extracting a machine identification number (MIN) of an access-requested terminal from a phone number domain (PND) and transferring the MIN to a requested IP broker (RIB) when a terminal requests an access to the web-phone service;

15        b) determining whether an IP address is allocated to the access-requested terminal at the RIB;

      c) controlling a network access server (NAS) to allocate an IP address to the access-requested terminal by using an ATM pool number corresponding to the MIN of the access-requested terminal in case that the IP address is not allocated to the access-requested terminal; and

20        d) transferring the allocated IP address of the access-requested terminal from the RIB to the access-requesting terminal through the PND to establish a connection between the access-requesting terminal and the access-requested terminal.

25        6. The method as recited in claim 5, wherein the access-requesting terminal is a terminal of Internet contents provider which provides Internet contents.

30        7. The method as recited in claim 5, wherein at the step b), if the access-requested terminal does not have an allocated IP address, at the step c), the NAS is controlled to allocate an available IP address to the access-requested terminal by using an ATM pool number corresponding to the

MIN of the access-requested terminal and the NAS transfers the IP address to the RIB.

8. The method as recited in claim 5, further comprising the step of:

e) transferring the allocated IP address of the access-requested terminal from the RIB to the access-requesting terminal through the PND and establishing a connection between the access-requesting terminal and the access-requested terminal in case that the access-requested terminal already has an allocated IP address at the step b).

9. The method as recited in claim 5, wherein the RIB controls the NAS to forcibly allocate an available IP address, which is not used, extracts IP address according to the MIN of the user, and stores the IP address as a form of database so as to return the IP address upon an access request of the PND.

10. A computer readable recording medium including a microprocessor for a web-phone service, comprising the functions of:

a) extracting a machine identification number (MIN) of an access-requested terminal from a phone number domain (PND) and transferring the MIN to a requested IP broker (RIB) when a terminal requests an access to the web-phone service;

b) determining whether an IP address is allocated to the access-requested terminal at the RIB;

c) controlling a network access server (NAS) to allocate an IP address to the access-requested terminal by using an ATM pool number corresponding to the MIN of the access-requested terminal in case that the IP address is not allocated to the access-requested terminal; and

d) transferring the allocated IP address of the access-requested terminal from the RIB to the access-

requesting terminal through the PND to establish a connection between the access-requesting terminal and the access-requested terminal.

5           11. The computer readable recordable medium as recited in claim 10, further comprising the function of:

          e) transferring the allocated IP for the access-requested terminal to the access-requesting terminal and establishing a connection between the access-requesting  
10 terminal and the access-requested terminal at the RIB in case that the access-requested terminal already has an allocated IP at the function b).